Preliminary Communications

Treatment of Reiter's Disease with Stilboestrol

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A prospective study of Reiter's disease has been in progress at the Rheumatism Research Centre, Manchester Royal Infirmary, since 1957, and the clinical and laboratory characteristics of the disease at its onset and during its evolution, as studied in the first 82 patients, have already been reported (Popert, Gill, and Laird, 1964). Alternate patients in this series received oxytetracycline 500 mg. four times daily for five days and prostatic massage, but analysis showed that the duration and extent of the arthritis were not appreciably influenced by this treatment of the genito-urinary infection (see Table).

Effects of Treatment and Comparison of Groups of Patients

	Previous Study (Popert *et al.* 1964)		Present Study (10 Cases)
Group:	Tetracycline	Control	Stilboestrol
Mean No. of joints affected at first examination	5·3 (39 cases)	4·7 (42 cases)	5·4
Mean No. of new joints affected after first examination	1·98 (38 cases)	1·81 (41 cases)	1·6
Maximum No. of joints affected at any one examination	6·0 (38 cases)	5·5 (39 cases)	6·7
Mean duration of extra-articular lesions (weeks)	8·5 (24 cases)	8·0 (31 cases)	10
E.S.R. Initial examination (mean)	48·6 (82 cases)		45
Mean duration of attack in cases followed to recovery (weeks)	24·8 (range 6–92) 25 cases	26·3 (range 3–78) 29 cases	17·5

Impressed by the rarity of Reiter's disease in the female, and being in agreement with the view that there was no effective treatment of the disease (King, 1964), we decided in December 1963 to use small doses of stilboestrol in all cases. The conditions of the study and the general care of the patients were similar to those already described (Popert *et al.*, 1964) ; no antibiotic was given, and the non-gonococcal urethritis was ignored: The hormone nature of the treatment and its possible side-effects were explained to every patient, and none refused to have it. At first tab. stilboestrol *B.P.* 0.5 mg. was given twice daily for 21 days, but in August 1964 the dosage was doubled (1 mg. twice daily for 21 days). No side-effects resulted, and our clinical impression of the progress of the patients was encouraging. Analysis of 10 patients treated for a first attack of Reiter's disease with stilboestrol is presented in the Table. It will be noted that they correspond closely to the series previously reported (Popert *et al.*, 1964) in respect of the mean number of joints affected at first examination, the mean number of new joints affected after first examination, the maximum number of joints affected at any one examination, the mean duration of extra-articular lesions, and the initial erythrocyte sedimentation rate (E.S.R.). It will also be noted that the mean duration of attack in cases followed to recovery in the patients treated with stilboestrol (17.5 weeks) is shorter than that for the cases reported in our earlier study (about 25 weeks).

No firm conclusions can be drawn from such a small series of cases, but this preliminary experience with stilboestrol in very small dosage has led us to begin a controlled "double-blind" study using larger dosage. The improvement in or actual suppression of the arthritis induced in rats by Freund's adjuvant after using oestrogens (Muller and Kappas, 1964) further encourages us to make this trial.

Summary

A preliminary report is given of the effect of small doses of stilboestrol in 10 patients suffering from a first attack of Reiter's disease. The results appear to justify a controlled trial of larger doses of stilboestrol in this condition, in which hitherto various forms of treatment have proved ineffective.

S. M. LAIRD, M.D., B.SC., M.R.C.P.GLASG., D.P.H.,
Consultant Venereologist, Royal Infirmary, Manchester.

A. J. GILL, M.B., D.P.H.,
Consultant Venereologist, Ladywell Hospital, Salford.

D. A. PITKEATHLY, M.B., M.R.C.P.ED., M.R.C.P.GLASG.,
Rheumatism Research Centre, Royal Infirmary, Manchester.

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Medical Memoranda

Pyloric Antral Mucosal Diaphragm

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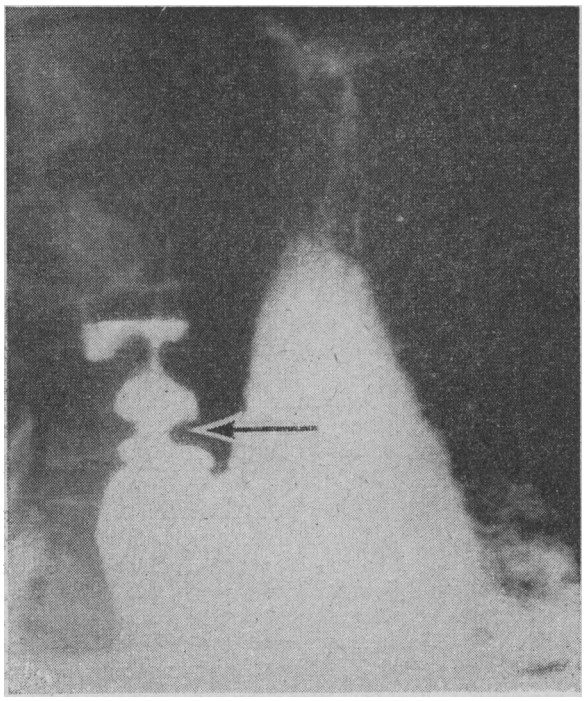
A septum at or near the pylorus is a congenital abnormality the rarity of which prompts this case report.

Case Report

A 29-year-old woman presented in January 1964 with a five-year history of intermittent episodes of heartburn and epigastric discomfort which occurred one to two hours after meals and were relieved by vomiting. At first she had these attacks every few weeks, but later they became more frequent and for three months she had been afraid to eat because she vomited after each meal. Symptoms were constantly worse in the pre-menstrual week ; her weight was unaltered. Examination was negative, the abdomen being normal.

Investigations.—Hb 92% (13.6 g./100 ml.) ; plasma electrolytes normal ; plasma urea 24 mg./100 ml. ; no occult blood in stools. Barium-meal examination (see Fig.) showed a fixed ring-like stenosis 2.5 cm. from the pylorus. Proximally the gastric mucosa was thickened and irregular but no ulcer was seen. Barium passed readily into the duodenum. A week later these appearances were unchanged. On gastroscopy (Dr. J. C. Hawksley) the diaphragm with a central aperture was easily seen. Chronic gastritis was present.

Laparotomy (Professor R. S. Pilcher).—The stomach and duodenum looked and felt normal. A longitudinal incision in the duodenum was extended to divide the pylorus, which appeared normal; 2 cm. proximal to it the septum was found with a central aperture about 1 cm. across. No ulceration was present. On extending the incision through the seromuscular coat the diaphragm was incised and it immediately disappeared, becoming indistinguishable from the surrounding mucosa. The longitudinal incision was closed transversely.



Fixed ring-like stenosis 2.5 cm. from the pylorus. The arrow indicates the diaphragm.

Post-operative recovery was uneventful. Five months later she had had no further symptoms.

COMMENT

This anomaly probably arises from a failure of canalization of the embryonic foregut. The diaphragm consists of mucosa enclosing submucosa only, without muscle or fibrous tissue. If imperforate, pyloric obstruction occurs immediately after birth. Of 17 cases of pyloric atresia reviewed by Becker, Schneider, and Fischer (1963), 12 were caused by pyloric or prepyloric septa of this sort. In another neonatal case (Despirito and Guthorn, 1957), an orifice was present, but prolapsed mucosa, acting as a flap valve, occluded it. If an aperture exists, symptoms are usually delayed until adult life or even old age. Munro (1963) quoted 16 published cases and added another. Thirteen further cases have been reported (Chamberlain and Addison, 1959; Melamed *et al.*, 1960; Spencer, 1961; Young, 1961; Bergeron and Bourdeix, 1963; Popesco-Urluieni *et al.*, 1963; Singer, 1963; Stahl, 1963; Kenny, 1963). Of these 30 patients, 16 were women. The age at onset of symptoms ranged from 29 to 70 years. Characteristically, epigastric discomfort after meals, relieved by vomiting, occurred intermittently over months or years, loss of weight, if any, being regained in remissions. The diaphragm was at the pylorus in 17 and prepyloric (usually 2–3 cm.) in the remainder. Seven patients had associated gastritis and nine gastric ulceration.

Rhind (1959) has suggested that a linear ulcer might produce such a diaphragm by alternate breaking down and healing combined with mechanical stretching by passing food. However, 19 patients (and the present one) showed no evidence of past or active ulceration at operation, and in view of the similar structure of the neonatal septal atresias a congenital origin seems more likely. If this is so, why do symptoms develop in adult life when the orifice (usually 2–4 mm. across, but often larger) has allowed the free passage of food for many years? Sames (1949) mentioned poor mastication as a possible cause and this may have been so in the case of the man described by Passalacqua and Romero (1955) whose symptoms started after multiple dental extractions. Gastritis causing mucosal oedema (Rowling, 1959) could account for some cases, but in most there is no good explanation. It is interesting that our patient was worse in the pre-menstrual period.

The ease of diagnosis in the recorded cases varied. Radiologically, the septum was clearly seen before operation in only nine cases, although it was evident in retrospect in three more. The rest showed pyloric stenosis or antral deformity of uncertain cause, no details being given in four cases. Delayed gastric emptying was mentioned (or implied) in about one-third of patients; several more had an excess of resting juice. At operation the absence of palpable abnormality and the tendency of the diaphragm to vanish if incised raised further difficulties, and on several occasions the true diagnosis was discovered only on examination of the resected stomach. This perhaps explains the lack of reports of this condition as an incidental post-mortem finding commented on by Melamed *et al.* (1960).

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N. CONWAY, M.B., M.R.C.P.,
Medical Registrar, University College Hospital, London.

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